THE BIG IDEA	During this module, students will be introduced to the aquaculture industry as well as its historical foundations and presence in Canada. Topics from upcoming modules are introduced including the need for sustainable protein sources in the future, technological developments in the aquaculture industry, and the health benefits of seafood.

DISCOVER	*Pre-video Discussion Questions:*
	• "**What is aquaculture? Does it sound like any other words you are familiar with?"**
	  ○ Aquaculture is the farming of fish, shellfish and aquatic plants in fresh or saltwater.
	  ○ Be sure to differentiate from being a wild capture fisherman. An Aquaculturist is a fish farmer with livestock. Much like a traditional farmer on land.
	• **"What do you think might be different about an aquaculture installation as compared to traditional agriculture on land? Are there any similarities?"**
	  ○ Both will raise and care for livestock in a sustainable manner, caring for the health of the organisms they raise.
	  ○ Both have strict regulations to make sure the food they produce is healthy and safe.
	  ○ Both have to deal with pests and illness among their livestock.
	  ○ Aquaculture can be done on land but also in open water, which gives aquaculture farmers a 3rd dimension to raise livestock, vertically in the water column.
	  ○ Open water aquaculture installations have to manage volatile weather and rough water.

LEARN	**Watch Module #1:** The History of Aquaculture
EXPLORE	*Post-video Discussion Questions:* • "How do you think Aquaculturists might use AI and machine learning to help on their farm?" • "What factors contribute to aquaculture being a highly sustainable protein source?" • Some of the earliest evidence of aquaculture can be found in the Budj Bim area of Australia created by the Gunditjmara people. Learn more about the practices here.
CONSOLIDATE	*Check student understanding of Module #1 with the included quiz.* • "Now that you have a basic understanding of the aquaculture industry, what kind of skills might be needed to pursue a job in this field?"

1) Where was open water salmon aquaculture first developed in the early 1970s?
   a. China
   b. Norway
   c. Australia
   d. Canada

2) What are the three purposes of aquaculture?
   a. For consumption, for pets, and for pharmaceutical use
   b. To be a sustainable protein, for a protein-dense food source and to maintain global populations
   c. For pharmaceutical use, to reduce greenhouse gas emissions, and for consumption

3) By 2050, it is predicted that worldwide demand for animal protein will increase by…
   a. 50%
   b. 60%
   c. 70%
   d. 80%

4) Which of the following is *not* a top species farmed by Aquaculturists around the world?
   a. Carp
   b. Bass
   c. Mussels
   d. Tilapia

5) Which of the following is *not* a top species farmed by Aquaculturists in Canada?
   a. Salmon
   b. Trout
   c. Tilapia
   d. Blue mussels
   e. Oysters
   f. Tuna

6) True or false; seaweeds are important aquaculture products / species?
   a. True
   b. False

7) In the past 30 years capture fisheries have only increased by 1.2% while aquaculture production has increased by…
   a. …almost 4%
   b. …almost 6%
   c. …almost 8%
   d. …almost 10%

8) Which of the following is *not* a health benefit of seafood?
   a. High amounts of dietary fiber
   b. Rich in minerals
   c. Protein dense
   d. Source of Omega-3 fatty acids

9) In which country was the genetically supermale Tilapia strain developed?
   a. Norway
   b. The United States
   c. Australia
   d. Indonesia

10) Aquaculture farms must be established close to an ocean or lake.
   a. True
   b. False

11) How much of the seafood humans eat comes from aquaculture?
   a. 10%
   b. 25%
   c. 50%
   d. 100%